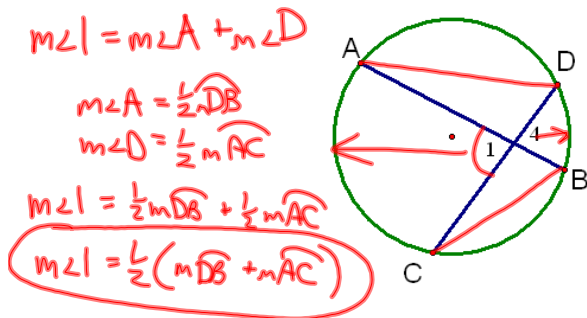
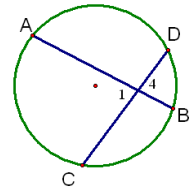


## 10-6 Other Angles



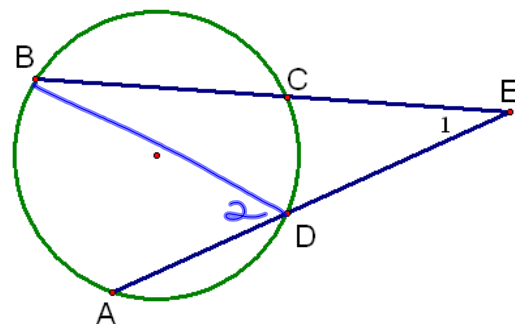
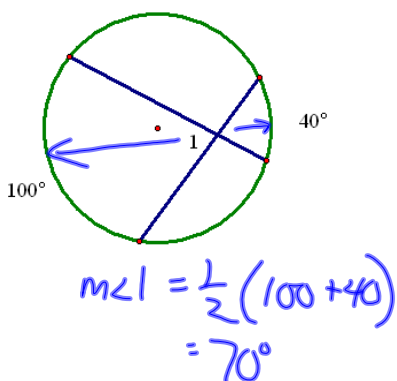
Theorem 10-12--The measure of an angle formed on the inside of a circle (by 2 secants or 2 chords) is half the sum of the measures of the intercepted arcs.

$$Inside = \frac{1}{2}(\text{sum of arcs})$$



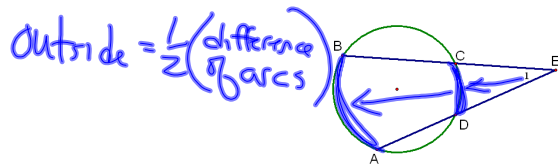
gsp

Find the measure of the angle.



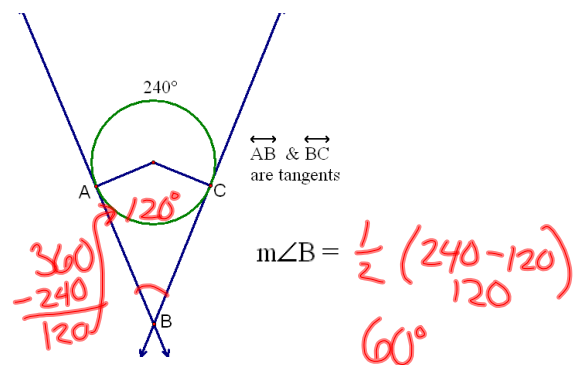
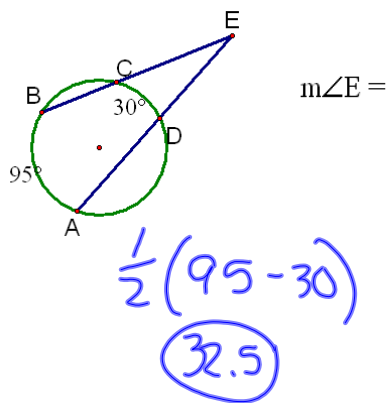
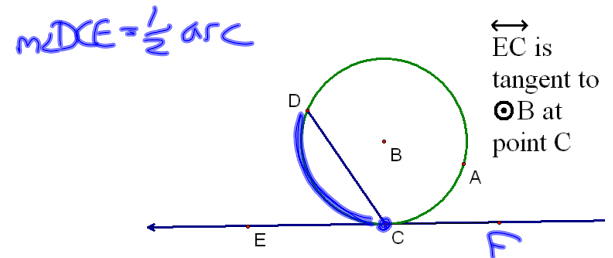
$m\angle 2 = m\angle B + m\angle 1$   
 $m\angle 2 - m\angle B = m\angle 1$   
 $\frac{1}{2}m\widehat{BA} - \frac{1}{2}m\widehat{CD} = m\angle 1$   
 $\frac{1}{2}(m\widehat{BA} - m\widehat{CD}) = m\angle 1$

Theorem 10-14--The measure of an angle formed on the **outside** of a circle (by 2 secants, 2 tangents, or secant and a tangent) is half the **difference** of the measures of the intercepted arcs.



gsp

Theorem 10-13--An angle formed by a secant and a tangent at the point of tangency =  $\frac{1}{2}$  intercepted arc





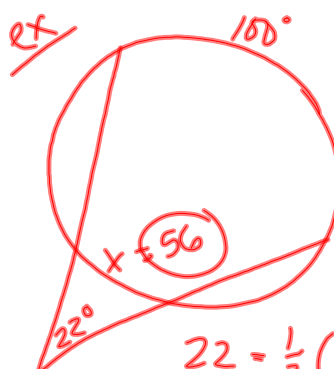
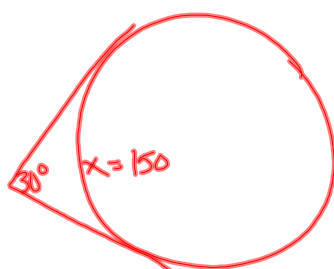
$$42 = \frac{1}{2}(360 - x - x)$$

$$42 = \frac{1}{2}(360 - 2x)$$

$$84 = 360 - 2x$$

$$-280 = -2x$$

$$140 = x$$

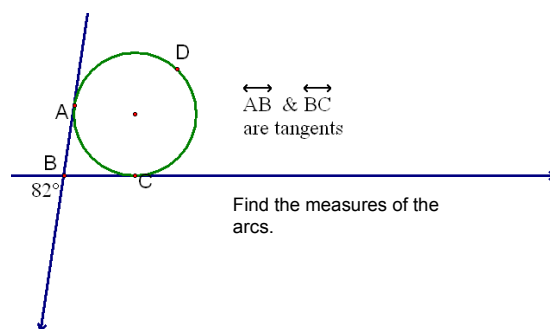
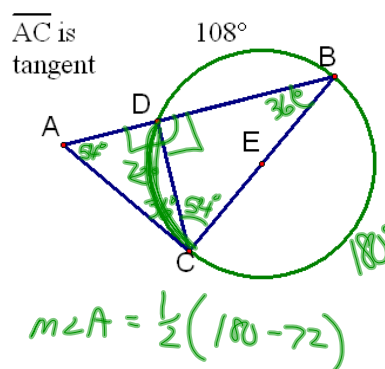


$$22 = \frac{1}{2}(100 - x)$$

$$44 = 100 - x$$

$$-56 = -x$$

$$56 = x$$



HW

p564-565 12-30

Attachments

---

10\_6\_gsp\_example.gsp